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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/736,632
Filing Date: December 17, 2003
Appellant(s): MANZANARES, CARLOS

Sheetal S. Patel
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12/17/2008 appealing from the Office action mailed 4/29/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any pending related appeals, or any other interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2001/0037395	Sabat Jr. et al.	03-2001
2002/0006779	Park et al.	04-2001
Configuration Management;	ETSI	06-2001

3G configuration

management; Concept and

main requirements (3GPP

TS 32.600 version 4.0.0

Release 4)

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. Claims 1, 2, 7, 9-11 and 21-24 are rejected under 35 U.S.C. 102(a) as being anticipated by Park et al. (US PAT PUB 2002/0006779, hereinafter Park).

In regards to claim 1, Park anticipates controlling a mobile communications network by a hierarchical radio network operations system (FIG. 1 is a functional block diagram illustrating a configuration of an apparatus for managing a mobile communication network in an IMT-2000 system) with at least one radio network operations system (Figure 1, Control station 300) on a subordinate level and a radio network operations system (Figure 1, TMN network management center 100) on a superior level wherein the controlling comprises initiating a controlling action on the part of the radio network operations system on the superior level (section 0049, TMN network management center 100 transfers the CMISE service executive instruction i.e. initiates a controlling action), generating a call for data depending on the controlling

action (section 0053, generating the CMISE service executive instruction being the state information collection command), forwarding the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action, - providing data on the part of the radio network operations system on the subordinate level affected by the controlling action in response to the call, and - forwarding the data to the radio network operations system on the superior level (section 0053, If the CMISE service executive instruction is the state information collection command in the S2-4, the local TMN repeater 301 within the pertinent control station 300 performs the state information collection operation as to the sub blocks 302 within the pertinent control station 300 thereof or as to the sub blocks within the pertinent base station 400, and then transfers the result to the TMN network management center 100 (S2-5)).

In regards to claim 10, Park anticipates at least one radio network operations system (Figure 1, Control station 300) on a subordinate level, a radio network operations system (Figure 1, TMN network management center 100) on a superior level, an initiator (paragraph 0047, inherently the CMISE service executive instruction generator that initiates CMISE service executive instruction) that is part of the radio network operations system on the superior level configured to initiate a controlling action (section 0049, TMN network management center 100 transfers the CMISE service executive instruction i.e. initiates a controlling action), a call generator (paragraph 0047, inherently the CMISE service executive instruction generator that generates CMISE service executive instruction) configured to generate a call for data depending on the controlling action (section 0053, generating the CMISE service

executive instruction being the state information collection command), a first interface between radio network operations system on the subordinate level and radio network operations system on the superior level (Figure 1, bi-directional arrows (first interface) connecting, TMN Network Management Center 100 and control station 300 via TMN Repeater 200) configured to forward the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action and to forward data to the radio network operations system on the superior level (section 0053, If the CMISE service executive instruction is the state information collection command in the S2-4, the local TMN repeater 301 within the pertinent control station 300 performs the state information collection operation as to the sub blocks 302 within the pertinent control station 300 thereof or as to the sub blocks within the pertinent base station 400, and then transfers the result to the TMN network management center 100 (S2-5)).and a first provider (Figure 7, element S2-5-3, inherently the associated element that transfers the result to the TMN network management center 100) that is part of the radio network operations system on the subordinate level configured to provide data in response to the call (section 0053, If the CMISE service executive instruction is the state information collection command in the S2-4, the local TMN repeater 301 within the pertinent control station 300 performs the state information collection operation as to the sub blocks 302 within the pertinent control station 300 thereof or as to the sub blocks within the pertinent base station 400, and then transfers the result to the TMN network management center 100 (S2-5)).

In regards to claims 2 and 11 Park anticipates an executor (Inherently, the element that executes the method of Figure 6B element S2-6) to execute the controlling action based on the retrieved data (section 0062, the TMN network management center 100 manages the pertinent control station 300 and the pertinent base station 400 by means of the TMN method i.e. execute controlling action, upon receiving the state information concerning the sub blocks 302 within the pertinent control station 300 or the sub blocks 402 within the pertinent base station 400 from the local TMN repeater 301 within the pertinent control station 300 (S2-6)).

In regards to claim 7, Park anticipates the data demanded depending on the controlling action comprise network elements parameters and/or network resources parameters of the radio network on the subordinate level (section 0011, state information, such as configuration, fault, performance, statistics, etc.).

In regards to claims 9 and 21 Park anticipates radio network operations system on a subordinate level is an operations system configured to manage a regional radio network (Figure 1 and section 0026, each of control stations 300 manages multiple base stations 400 i.e. manages regional radio network).

In regards to claim 22 Park anticipates at least one radio network operations system on a subordinate level (Figure 1, Control station 300); a radio network operations system on a superior level (Figure 1, TMN network management center 100), initiating means being part of the radio network operations system on the superior level for initiating a controlling action (section 0049, TMN network management center 100 transfers the CMISE service executive instruction i.e. initiates a controlling action);

call generating means for generating a call for data depending on the controlling action (section 0053, generating the CMISE service executive instruction being the state information collection command); a first interface between radio network operations system on the subordinate level and radio network operations system on the superior level (Figure 1, bi-directional arrows (first interface) connecting, TMN Network Management Center 100 and control station 300 via TMN Repeater 200) for forwarding the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action and for forwarding data to the radio network operations system on the superior level (section 0053, If the CMISE service executive instruction is the state information collection command in the S2-4, the local TMN repeater 301 within the pertinent control station 300 performs the state information collection operation as to the sub blocks 302 within the pertinent control station 300 thereof or as to the sub blocks within the pertinent base station 400, and then transfers the result to the TMN network management center 100 (S2-5)), and first providing means being part of the radio network operations system on the subordinate level for providing data in response to the call (section 0053, If the CMISE service executive instruction is the state information collection command in the S2-4, the local TMN repeater 301 within the pertinent control station 300 performs the state information collection operation as to the sub blocks 302 within the pertinent control station 300 thereof or as to the sub blocks within the pertinent base station 400, and then transfers the result to the TMN network management center 100 (S2-5)).

In regards to claim 23 Park anticipates a first interface between a radio network operations system on a subordinate level and a radio network operations system on a superior level (Figure 1, bi-directional arrows (first interface) connecting, TMN Network Management Center 100 and control station 300 via TMN Repeater 200) configured to forward a call for data (section 0049, TMN network management center 100 transfers the CMISE service executive instruction i.e. initiates a controlling action) which depends on a controlling action to at least one of the radio network operations systems on the subordinate level affected by the controlling action (section 0053, If the CMISE service executive instruction is the state information collection command in the S2-4, the local TMN repeater 301 within the pertinent control station 300 performs the state information collection operation as to the sub blocks 302 within the pertinent control station 300 thereof or as to the sub blocks within the pertinent base station 400, and then transfers the result to the TMN network management center 100 (S2-5)) and to forward data to the radio network operations system on the superior level (section 0053, If the CMISE service executive instruction is the state information collection command in the S2-4, the local TMN repeater 301 within the pertinent control station 300 performs the state information collection operation as to the sub blocks 302 within the pertinent control station 300 thereof or as to the sub blocks within the pertinent base station 400, and then transfers the result to the TMN network management center 100 (S2-5)), wherein data is provided in response to the call through the radio network operations system on the subordinate level (Figure 6B element S2-6, to execute the controlling action based on the retrieved data; section 0062, the TMN network management center 100

manages the pertinent control station 300 and the pertinent base station 400 by means of the TMN method i.e. execute controlling action, upon receiving the state information concerning the sub blocks 302 within the pertinent control station 300 or the sub blocks 402 within the pertinent base station 400 from the local TMN repeater 301 within the pertinent control station 300 (S2-6)).

In regards to claim 24 Park anticipates forwarding a call for data section 0049, TMN network management center 100 transfers the CMISE service executive instruction i.e. initiates a controlling action) which depends on a controlling action (Figure 6B element S2-6, to execute the controlling action based on the retrieved data; section 0062, the TMN network management center 100 manages the pertinent control station 300 and the pertinent base station 400 by means of the TMN method i.e. execute controlling action, upon receiving the state information concerning the sub blocks 302 within the pertinent control station 300 or the sub blocks 402 within the pertinent base station 400 from the local TMN repeater 301 within the pertinent control station 300 (S2-6)), using a first interface between a radio network operations system on a subordinate level and a radio network operations system on a superior level (Figure 1, bi-directional arrows (first interface) connecting, TMN Network Management Center 100 and control station 300 via TMN Repeater 200), to at least one of the radio network operations systems on the subordinate level affected by the controlling action (paragraph 0049, the TMN network management center 100 transfers the CMISE service executive instruction to the TMN repeater 201 within the BSM 200 (S2-1)) and to forward data to the radio network operations system on the superior level; and

providing data in response to the call through the radio network operations system on the subordinate level (section 0053, If the CMISE service executive instruction is the state information collection command in the S2-4, the local TMN repeater 301 within the pertinent control station 300 performs the state information collection operation as to the sub blocks 302 within the pertinent control station 300 thereof or as to the sub blocks within the pertinent base station 400, and then transfers the result to the TMN network management center 100 (S2-5)).

Claim Rejections - 35 USC § 103

2. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park as applied to claims 1 and 10 above and further in view of Configuration Management; 3G configuration management; Concept and main requirements (3GPP TS 32.600 version 4.0.0 Release 4), hereinafter 3GPP TS 32.600) and Sabat Jr. et al. (US PAT PUB 2001/0037395, hereinafter Sabat).

In regards to claims 3 and 12 Park teaches receiving data by the radio network operations system on the superior level from at least one of the radio network operations systems on the subordinate level (section 0053, If the CMISE service executive instruction is the state information collection command in the S2-4, the local TMN repeater 301 within the pertinent control station 300 performs the state information collection operation as to the sub blocks 302 within the pertinent control station 300 thereof or as to the sub blocks within the pertinent base station 400, and then transfers the result to the TMN network management center 100 (S2-5)).

Park does not explicitly teach (an exporter is part of the radio network operations system) exporting the retrieved data by the radio network operations system on the subordinate level.

3GPP TS 32.600 teaches exporting the retrieved data by the radio network operations system on the subordinate level (page 17 section 6.2.2. In addition to being able to provide information on request, the NE is required to have the capability of reporting i.e. export notifications about changed/removed information autonomously. Generally this will be performed when some information on the state or operation of the system has changed. The following shall be supported: The following type of events shall be notified to the NM, if enabled by the NM (these three notification types may be enabled/disabled separately by the NM): 1. Object creation/deletion; 2. Attribute value change; 3. State change)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Park's teaching to incorporate the steps of exporting the retrieved data by the radio network operations system on the subordinate level as suggested by 3GPP TS 32.600. The motivation is that it is advantageous to adapt to known standards for implementation of Network Management System (NMS) based communication for following reason: Companies actively involved in adhering to standards more frequently reap short- and long-term cost-savings and competitive benefits than those that do not. Standardization can lead to lower transaction costs in the economy as a whole, as well as to savings for individual businesses. Standards have a positive effect on the buying power of companies. Standards can help

businesses avoid dependence on a single supplier because the availability of standards opens up the market. The result is a broader choice for businesses and increased competition among suppliers. Companies also have increased confidence in the quality and reliability of suppliers who use standards. In addition, standards are used by businesses to exert market pressure on companies further down the value chain, i.e., their clients. Thus, businesses can use standards to broaden their potential markets.

Park and 3GPP TS 32.600 do not explicitly teach an importer or a retriever that is part of the radio network operations system importing/retrieving the data by the radio network operations system on the superior level, and (data memory is part of radio network operations system) storing the imported data to data memory in the radio network operations system on the superior level.

Sabat in the same field of endeavor teaches an importer or a retriever that is part of the radio network operations system importing/retrieving the data by the radio network operations system on the superior level, and (data memory is part of radio network operations system) storing the imported data to data memory in the radio network operations system on the superior level (section 0015, the open network management system also provides a facility whereby information to which common access is needed maybe cached or accessed through database queries. In particular, the open access NMS can autonomously initiate queries (import/retrieve status information, and query generator satisfies the limitations of importer/retriever) to the

open access system elements to determine status information, and then place (store) this information in its own database (memory)).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Park and 3GPP TS 32.600's teaching to incorporate the steps of importing/retrieving the data by the radio network operations system on the superior level, and storing the imported data to data memory in the radio network operations system on the superior level as suggested by Sabat. The motivation is that (as suggested by Sabat section 0015) this serves two purposes. First, when an SNMP request message is received from a tenant NMS, the local database can be queried for the information rather than sending request messages out to the system elements. This prevents unnecessary network traffic when a different tenant NMS's are making queries for common information such as, for example, fault states, temperature information and the like which should be sharable among the various system operators. A second benefit is provided in that relatively large amounts of data can be passed to the tenant NMS without crating correspondingly large amounts of traffic on the internal open access system communication network.

3. Claims 6, 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park as applied to claims 1 and 10 above and further in view of 3GPP TS 32.600.

In regards to claim 6 Park teaches controller for controlling a configuration of radio network elements and/or radio network resources (a controller, is the element that executes the method of Figure 6B element S2-6) to execute the controlling action based on the retrieved data; section 0062, the TMN network management center 100

manages the pertinent control station 300 and the pertinent base station 400 by means of the TMN method i.e. execute controlling action, upon receiving the state information concerning the sub blocks 302 within the pertinent control station 300 or the sub blocks 402 within the pertinent base station 400 from the local TMN repeater 301 within the pertinent control station 300 (S2-6)).

Park does not explicitly teach a monitor for monitoring configuration of radio network elements and/or radio network resources.

3GPP TS 32.600 in the same field of endeavor teaches the system monitoring service component (a monitor) provides the operator with the ability to receive reports (on request or spontaneously) on the configuration of the entire network or parts of it from managed NEs. These consist of structure, states, versions employed and data settings. The NE sends spontaneous reports if there was an autonomous change of, for example, the states or other values due to Fault Management (FM) actions (page 13 section 5.2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Park's teaching to incorporate the teachings of monitoring configuration of radio network elements and/or radio network resources as suggested by 3GPP TS 32.600. The motivation is that it is advantageous to adapt to known standards for implementation of Network Management System (NMS) based communication for following reason: Companies actively involved in adhering to standards more frequently reap short- and long-term cost-savings and competitive benefits than those that do not. Standardization can lead to lower transaction costs in

the economy as a whole, as well as to savings for individual businesses. Standards have a positive effect on the buying power of companies. Standards can help businesses avoid dependence on a single supplier because the availability of standards opens up the market. The result is a broader choice for businesses and increased competition among suppliers. Companies also have increased confidence in the quality and reliability of suppliers who use standards. In addition, standards are used by businesses to exert market pressure on companies further down the value chain, i.e., their clients. Thus, businesses can use standards to broaden their potential markets.

In regards to claim 8, Park does not explicitly teach the data demanded depending on the controlling action comprise topology data of the radio network on the subordinate level.

3GPP TS 32.600 in the same field of endeavor teaches The system monitoring service component provides the operator with the ability to receive reports (on request or spontaneously) on the configuration of the entire network (topology) or parts of it from managed NEs. These consist of structure, states, versions employed and data settings (page 13 section 5.2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Park's teaching to incorporate the teachings of the data demanded depending on the controlling action comprise topology data of the radio network on the subordinate level as suggested by 3GPP TS 32.600. The motivation is that it is advantageous to adapt to known standards for implementation of Network

Management System (NMS) based communication for following reason: Companies actively involved in adhering to standards more frequently reap short- and long-term cost-savings and competitive benefits than those that do not. Standardization can lead to lower transaction costs in the economy as a whole, as well as to savings for individual businesses. Standards have a positive effect on the buying power of companies. Standards can help businesses avoid dependence on a single supplier because the availability of standards opens up the market. The result is a broader choice for businesses and increased competition among suppliers. Companies also have increased confidence in the quality and reliability of suppliers who use standards. In addition, standards are used by businesses to exert market pressure on companies further down the value chain, i.e., their clients. Thus, businesses can use standards to broaden their potential markets.

Allowable Subject Matter

4. Claims 4, 5, 13-15 and 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

(10) Response to Argument

Appellant has itemized the arguments traversing the rejections of the appealed claims, each of which will be treated in turn.

Claim 1:

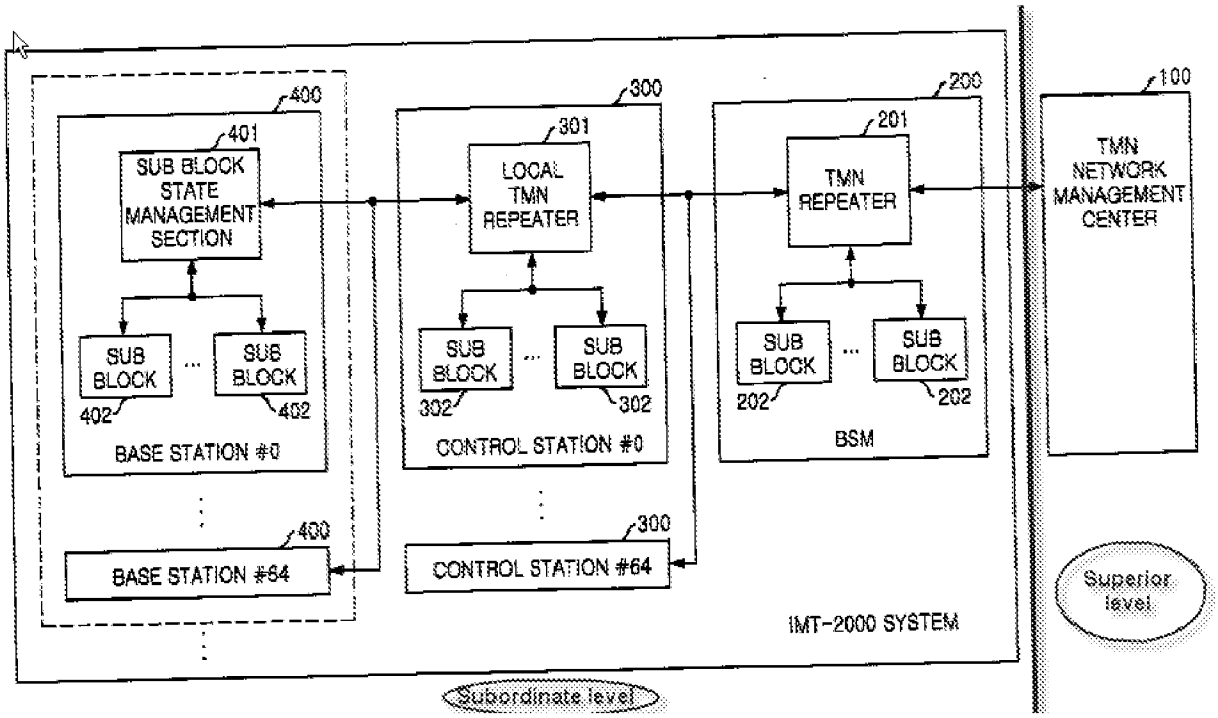
Appellant argues (page 15 paragraph 3) that *Park does not disclose, either expressly or inherently, at least, "controlling a mobile communications network by a hierarchical radio network operations system with at least one radio network operations system on a subordinate level and a radio network operations system on a superior level, wherein the controlling comprises initiating a controlling action on the part of the radio network operations system on the superior level" (emphasis added), as recited in claim 1*.

However, Examiner respectfully disagrees with the Appellant's assertion. Park does indeed teach the cited limitations. Specifically, Park discloses controlling a mobile communications network by a hierarchical radio network operations system (FIG. 1 is a functional block diagram illustrating a configuration of an apparatus for managing a mobile communication network in an IMT-2000 system) with at least one radio network operations system (Figure 1, Control station 300) on a subordinate level and a radio network operations system (Figure 1, TMN network management center 100) on a superior level wherein the controlling comprises initiating a controlling action on the part of the radio network operations system on the superior level (section 0049, TMN network management center 100 transfers the CMISE service executive instruction i.e. initiates a controlling action).

Appellant argues (page 16 paragraph 2) that *nowhere does Park suggest that a mobile communication network is controlled "by a hierarchical radio network operations system with at least one radio network operations system on a subordinate level and a radio network operations system on a superior level", as recited in claim 1*.

However, Examiner respectfully disagrees with the Appellant's assertion. Park does indeed teach the cited limitations.

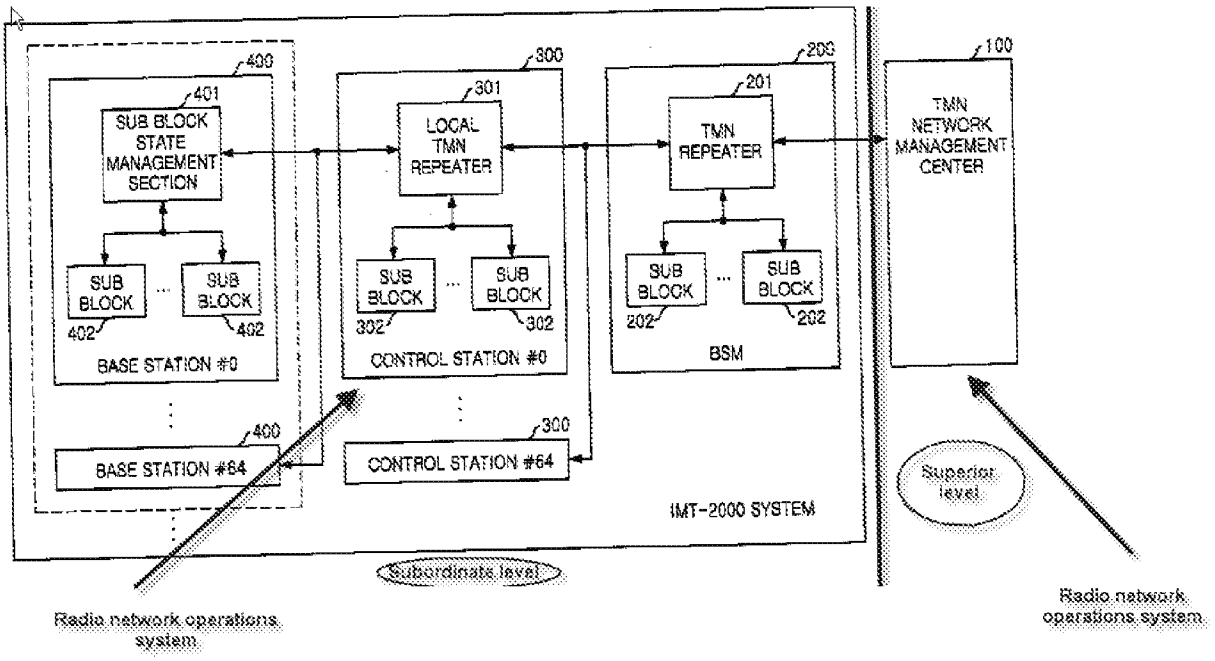
Firstly, Park's network is hierarchical:



Secondly, hierarchical radio network comprises

1) Radio network operations system on a superior level (Figure 1, TMN network management center 100),

2) Radio network operations system on a subordinate level (Figure 1, Control station 300).



Thirdly, mobile communication network being controlled is satisfied by among other paragraphs, paragraph 0049, TMN network management center 100 transfers the CMISE service executive instruction i.e. initiates a controlling action).

Appellant argues (page 16 last paragraph) that *the TMN network management center 100 described in Park manages state information of the respective sub blocks installed in the BSM 200, the control stations 300, and the base stations 400 and does not initiate any type of controlling action, as required by claim 1. Because the TMN network management center 100 described in Park does not initiate any type of controlling action, it is readily apparent that the TMN network management center 100 described in Park cannot equate to "a radio network operations system on a superior level" of claim 1.*

However, Examiner respectfully disagrees with the Appellant's assertion. The limitation "initiate controlling action" is a broad term and in view of the broadest

reasonable interpretation of the claim language Park does indeed teach the cited limitations. Park further teaches in Figure 6A and 6B (below):

FIG. 6A

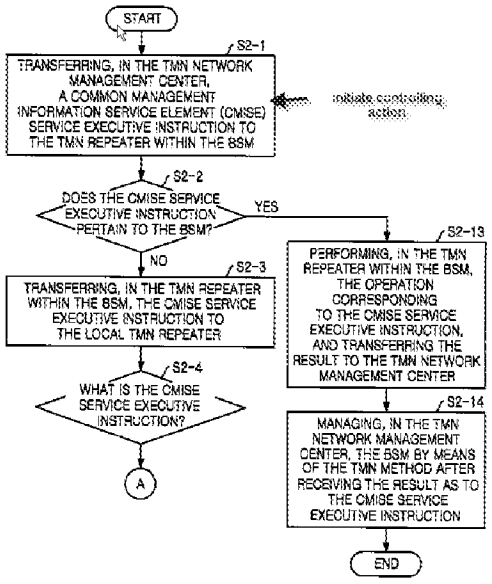
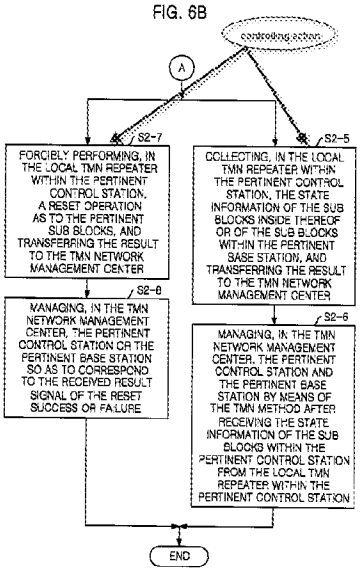


FIG. 6B



Park teaches in paragraph 0021:

> **[0021]** **FIG. 6** is a flow chart illustrating a process of managing the mobile communication network by means of the TMN when a common management information service element (CMISE) service executive instruction is generated from a TMN network management center according to the preferred embodiment of the present invention;

Appellant argues (page 17 paragraph 2) that *the control station 300 described in Park does not constitute a "radio network operations system on a subordinate level", as recited in claim 1, because the control station 300 described in Park serves as a generator for state information, i.e., configuration, fault, performance, statistics, etc., of the sub block 302 and does not "generat[e] a call for data depending on the controlling*

action" (claim 1, lines 7) to be forwarded "to at least one of the radio network operations system on the subordinate level affected by the controlling action" (claim 1, lines 8-9).

However, Examiner respectfully disagrees with the Appellant's assertion. The current claim language state:

"generating a call for data depending on the controlling action; forwarding the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action"

However, it does not state that "generating a call for data depending on the controlling action; forwarding the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action" is done by network operations systems on the subordinate level. Rather, the current claim language state that "generating a call for data depending on the controlling action; forwarding the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action" is done by network operations systems on the superior level. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *the control station 300 described in Park serves as a generator for state information, i.e., configuration, fault, performance, statistics, etc., of the sub block 302 and does not "generat[e] a call for data depending on the controlling action" (claim 1, lines 7) to be forwarded "to at least one of the radio network operations system on the subordinate level affected by the controlling action"*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the

specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Appellant argues (page 17 paragraph 2) that *for Park to suggest the above-quoted features of claim 1, the TMN network management center 100 must "generat[e] a call for data depending on the controlling action" (claim 1, lines 7) to be forwarded "to at least one of the radio network operations system on the subordinate level affected by the controlling action" (claim 1, lines 8-9). This is clearly not the case in Park..*

However, Examiner respectfully disagrees. Park does indeed teach the cited limitations. Specifically, Park teaches generating a call for data depending on the controlling action (section 0053, generating the CMISE service executive instruction being the state information collection command, i.e. call for data is satisfied by solicitation of configuration, fault, performance, statistic information etc.). Furthermore, figures 6A, 6B and 9 clearly shows the cited limitations:

FIG. 6A

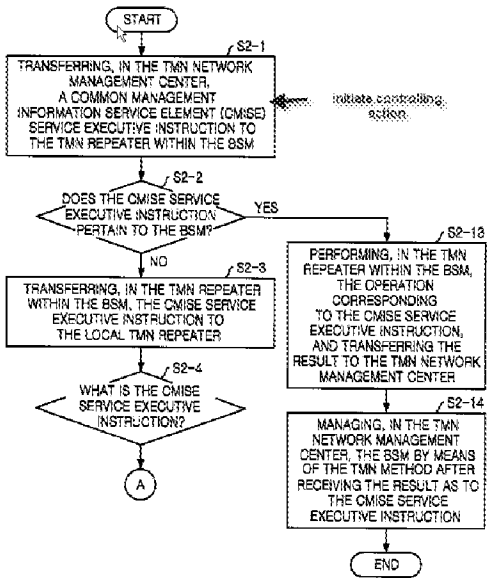


FIG. 6B

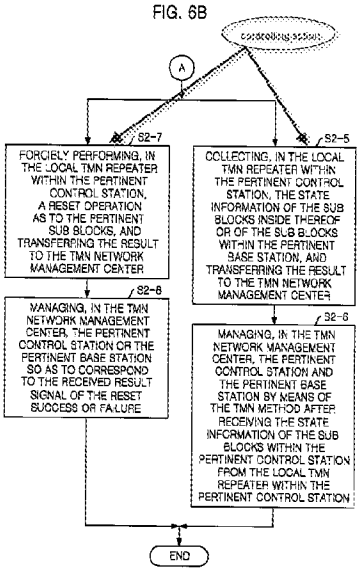
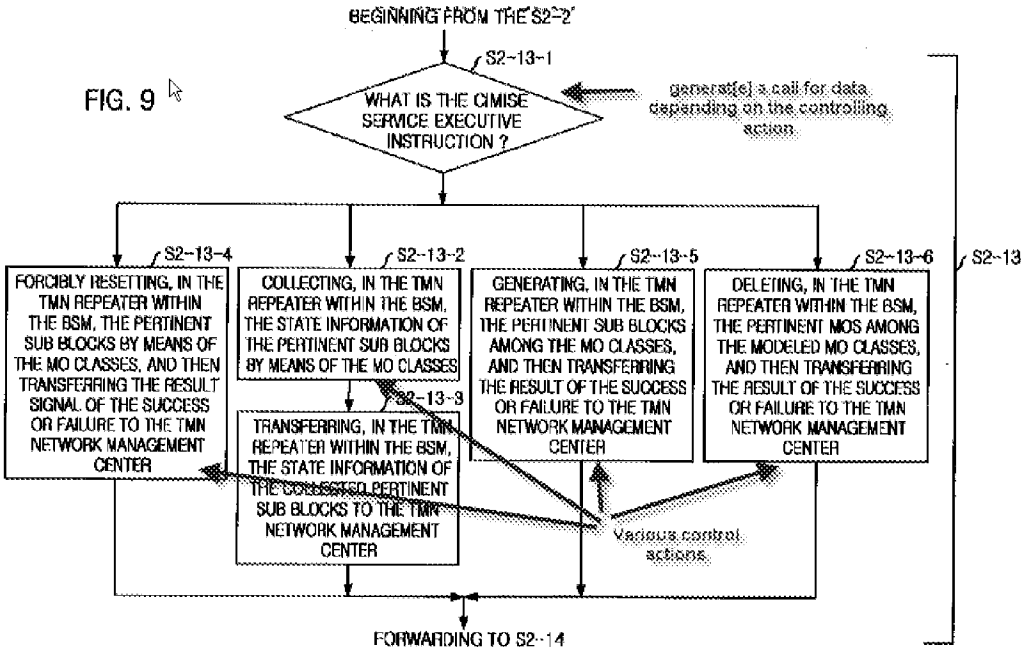


FIG. 9



Park further teaches:

> **[0048]** **FIG. 6** is a flow chart illustrating the process of managing the mobile communication network in the IMT-2000 system by means of the TMN when the CMISE service executive instruction is generated from the TMN network management center according to the preferred embodiment of the present invention.

satisfying *"generat[e] a call for data".*

> **[0052]** Then, the local TMN repeater **301** within the pertinent control station **300** determines whether the CMISE service executive instruction received from the TMN repeater **201** within the BSM **200** is the state information collection command, the sub block reset command, the MO generation command, or the MO erase command (**S2-4**).

satisfying "*depending on the controlling action".*

> **[0049]** First, the TMN network management center **100** transfers the CMISE service executive instruction to the TMN repeater **201** within the BSM **200** (**S2-1**).

Satisfying "*to be forwarded "to at least one of the radio network operations system on the subordinate level affected by the controlling action"".*

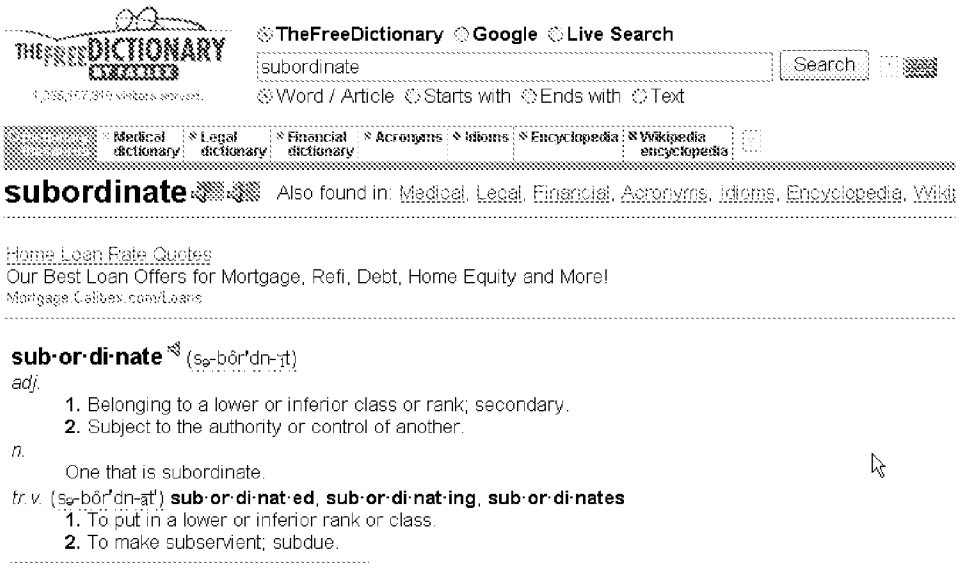
As such, Examiner respectfully disagrees with the Appellant's assertion (page 17 last paragraph) that *the Office Action's interpretation of the control station 300 and the TMN network management center 100, as described in Park, being part of the "hierarchical radio network operations system" is clearly incorrect*.

Appellant argues (page 18 paragraph one) that *because Park does not disclose, either expressly or inherently, "at least one radio network operation system on a subordinate level and a radio network operations system on a superior level", Park does not provide any type of suggestion of "a hierarchical network operation system", as recited in claim 1*.

However, Examiner respectfully disagrees to Appellant's assertion. Park does indeed teach *"a hierarchical network operation system".* Park clearly teaches:

> **[0002]** As well known, a TMN in a general concept is a logical structure for managing a telecommunication network and service by connecting an operation system and telecommunication network components via a reference interface through which necessary management information is interchanged, and also a substructure for systemically supporting the telecommunication management.
>
> **[0003]** In the meantime, the aforementioned TMN is applicable to a mobile communication network as a standardized network management method recommended by the International Telecommunication Union (ITU-T) M.3010. In this instant, the TMN defines and manages each component comprised in the mobile communication network as a MO (MO) by analyzing the same in an object-oriented point of view.
>
> **[0004]** Here, the MOs are abstract resources defined as attribute, behavior, management operation, notification, etc. Each resource has its attribute and transmits the notification as well as being subordinate to the management operation.
>
> **[0005]** Further, the MOs are aggregated in separate groups having same characteristics, i.e., attribute, management operation, behavior, and notification. Each group of the management objects is referred to as a MO class.

Clearly, MOs having same characteristics are subordinate to an operation system being in higher (superior) level; as can be ascertained from the meaning of "subordinate" below:



Appellant argues (page 18 paragraph one) *figure 1 of Park clearly illustrates that the TMN network management center 100 is outside of the IMT-2000 system, and, therefore, cannot form part of any hierarchical radio network operations system*.

However, Examiner respectfully disagrees with Appellant's interpretation of cited portion of prior art. Furthermore, Park clearly states:

[0010] To achieve the above objects, there is provided an apparatus for managing a mobile communication network in the IMT-2000 system by means of the TMN, which manages sub blocks within a BSM, a plurality of control stations, and a plurality of base stations in the IMT-2000 system, the apparatus includes a TMN network management center for managing a state information, i.e., configuration, fault, performance, statistics, etc., of the sub blocks within the BSM, the plurality of control stations, and the plurality of base stations by means of the TMN method, and transferring a common management information service element (CMISE) service executive instruction recommended by the International Telecommunication Union (ITU-T) to the BSM; a TMN repeater installed within the BSM and housing modeled MO classes, for collecting the state information of the sub blocks within the BSM thereof by means of the MO classes, and transferring the state information to the TMN network management center as well as updating the MO classes inside thereof so as to correspond to the CMISE service executive instruction received from the TMN network management center; a local TMN repeater installed in the plurality of control stations, and housing the modeled MO classes, for collecting the state information concerning the sub blocks within the control stations thereof by means of the MO classes and transferring the state information to the TMN network management center, while transferring the state information concerning the pertinent sub blocks transmitted from the pertinent base station among the plurality of base stations managed thereby to the TMN network management center, and then updating the MO classes inside thereof so as to correspond to the CMISE service executive instruction received from TMN repeater within the BSM; and a sub block state management section installed within each of base stations, for collecting the state information of the sub blocks within the base stations thereof and transferring the state information to the local TMN repeater within the control stations.

As such, Examiner respectfully disagrees with Appellant's assertion (page 18 lsat paragraph – page 10 first paragraph) that *because Park cannot remotely suggest "a hierarchical radio network operations system with at least one radio network operations system on a subordinate level and a radio network operations system on a superior level", Park cannot disclose, either expressly or inherently, at least, "generating a call for data depending on the controlling action, forwarding the call to at least one of the radio network operations systems on the subordinate level affected by the controlling action, and providing data on the part of the radio network operations system on the subordinate level affected by the controlling action in response to the call," as recited in claim 1*.

Claims 10:

Appellant argues (page 19 second paragraph) *the rejection of independent claim 10 be withdrawn and this claim be allowed for reasons similar to those discussed above with respect to claim 1*.

However, Examiner has clearly shown that claim 1 is not allowable for the reasons cited above; as such Honorable Board, it is believed that rejection to claim 10 should be sustained.

Claim 22:

Appellant argues (page 20 first paragraph) *the rejection of independent claim 22 be withdrawn and this claim be allowed for reasons similar to those discussed above with respect to claim 1*.

However, Examiner has clearly shown that claim 1 is not allowable for the reasons cited above; as such Honorable Board, it is believed that rejection to claim 22 should be sustained.

Claim 23:

Appellant argues (page 20 second paragraph) *the rejection of independent claim 23 be withdrawn and this claim be allowed for reasons similar to those discussed above with respect to claim 1.*

However, Examiner has clearly shown that claim 1 is not allowable for the reasons cited above; as such Honorable Board, it is believed that rejection to claim 23 should be sustained.

Claim 24:

Appellant argues (page 20 third paragraph) *the rejection of independent claim 24 be withdrawn and this claim be allowed for reasons similar to those discussed above with respect to claim 1.*

However, Examiner has clearly shown that claim 1 is not allowable for the reasons cited above; as such Honorable Board, it is believed that rejection to claim 24 should be sustained.

Claim 2:

Appellant argues (page 21 first paragraph) *claim 2 is dependent upon claim 1, and, therefore, inherits the patentable features thereof. Appellant respectfully requests that the rejection of claim 2 be withdrawn and this claim be allowed for at least the same reasons as base claim 1, and for the specific limitations recited therein.*

However, Examiner has clearly shown that claim 1 is not allowable for the reasons cited above; as such Honorable Board, it is believed that rejection to claim 2 should be sustained.

Claim 7:

Appellant argues (page 21 second paragraph) *Park cannot suggest the feature of claim 7, as Park fails to disclose, either expressly or implicitly, "a radio network on the subordinate level". Because Park does not disclose, either expressly or implicitly, any type of "radio network on the subordinate level", it would be impossible for Park to suggest that "the data demanded...comprises network elements parameters and/or network resources parameters of the radio network on the subordinate level" (claim 8, lines 1-3, emphasis added). Accordingly, Appellant respectfully requests that the rejection of dependent claim 7 be withdrawn and this claim be allowed for at least the same reasons as base claim 1, from which it depends upon, and for the specific limitations recited therein*.

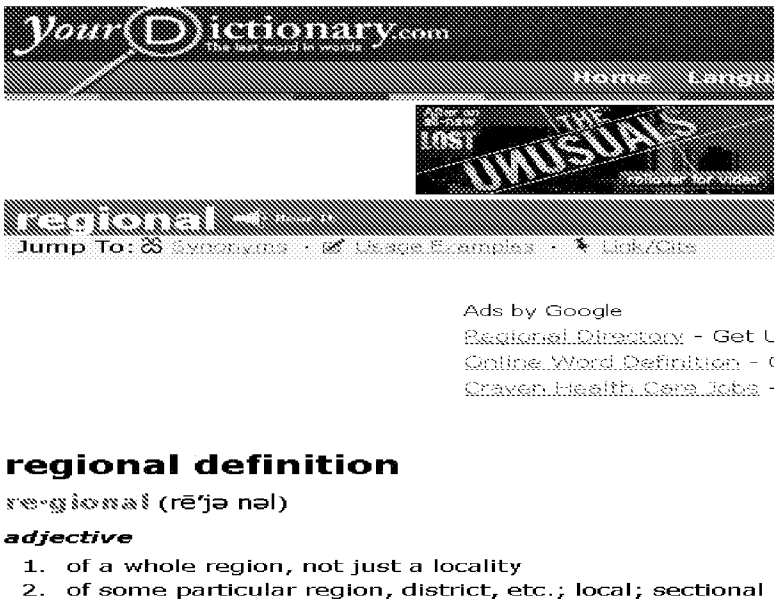
However, Examiner has clearly shown that claim 1 is not allowable for the reasons cited above; as such Honorable Board, it is believed that rejection to claim 7 should be sustained.

Claims 9 and 21:

Appellant argues (page 21 third paragraph) that *claim 9 recites, in part, "said radio network operations system on a subordinate level is an operations system for managing a regional radio network" (claim 9, lines 2-3). Claim 21, which has its own*

scope, recites a similar features. Appellant respectfully submits that the above-quoted feature is not disclosed, either expressly or inherently, by Park.

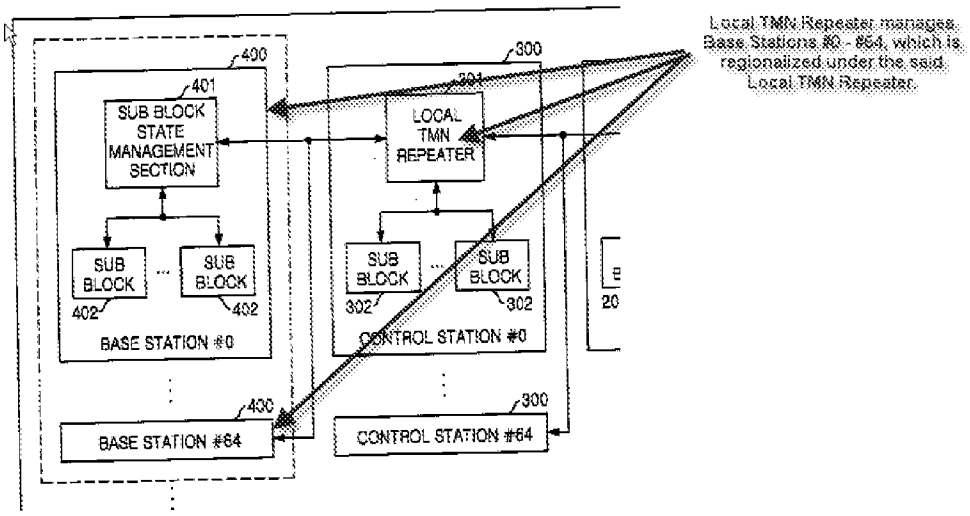
However, Examiner respectfully disagrees with Appellant's assertion. Park does indeed teach the cited limitations. Specifically, Park teaches radio network operations system on a subordinate level is an operations system configured to manage a regional radio network (Figure 1 and section 0026, each of control stations 300 manages multiple base stations 400 i.e. manages regional radio network comprising multiple base stations). Furthermore, the limitation "regional" is broad term:



In view of broadest reasonable interpretation of the claim language, Park does indeed teach the cited limitation; wherein region comprises multiple base stations.

Appellant argues (page 22 paragraph one) that *nothing in paragraph [0026] nor Figure 1 of Park remotely suggests how the control station 300 described in Park is "an operations system for managing a regional radio network" (claim 9, lines 2-3).*

However, Examiner respectfully disagrees with Appellant's assertion. As seen above that "regional" is a broad term which means among other things, "local" or "sectional". Figure 1 clearly shows, control station 300 houses Local TMN Repeater which manages Base Stations #0 to #64. As such, the base stations under local TMN Repeater are in essence "regionalized" under the said Local TMN Repeater.



Furthermore, Examiner has clearly shown that claim 1 is not allowable for the reasons cited above; as such Honorable Board, it is believed that rejection to claim 7 should be sustained.

Appellant argues (page 22 paragraph 3) that *the rejection of dependent claim 21 be withdrawn and this claim be allowed for reasons similar to those discussed above with respect to claim 7 and with respect to base claim 10, from which it depends upon.*

However, Examiner has clearly shown that claim 1 is not allowable for the reasons cited above; as such Honorable Board, it is believed that rejection to claim 21 should be sustained.

Claims 3 and 12:

Appellant argues (page 23 paragraph 2) that *the rejection of dependent claims 3 and 12 be withdrawn and these claims be allowed for at least the same reasons as their respective base claims.*

However, Examiner has clearly shown that claims 1 and 10 are not allowable for the reasons cited above; as such Honorable Board, it is believed that rejection to claims 3 and 12 should be sustained.

Appellant argues (page 23 last paragraph) that *Park cannot disclose, either expressly or implicitly, the features, because Park does not suggest any type of "radio network operations system on the superior level", as discussed above with respect to claim 1. Because Park does not suggest any type of "radio network operations system on the superior level", paragraph [0053] of Park, which was relied upon in the Office Action, cannot suggest that the "data [is retrieved] by the radio network operations system on the superior level from at least one of the radio network operations systems on the subordinate level", as recited in claim 3, and as similarly recited in claim 12. Furthermore, nothing was found or cited in either the 3GPP document or Sabat to cure the above-mentioned deficiencies of Park with respect to claims 3 and 12. Therefore, Appellant respectfully submits that none of the references, whether considered alone or in combination, disclose, either expressly or implicitly, at least, "retrieving data by the radio network operations system, on the superior level from at least one of the radio network operations systems on the subordinate level", as recited in claim 3, and as similarly recited in claim 12.*

However, Examiner has clearly shown that claims 1 and 10 are not allowable for the reasons cited above; as such Honorable Board, it is believed that rejection to claims 3 and 12 should be sustained.

Claim 6:

Appellant argues (page 30 last paragraph) that *neither reference cited in the Office Action remotely suggests any type of "a hierarchical radio network operations system...wherein the controlling comprises initiating a controlling action on the part of the radio network operations system on the superior level" (claim 1, lines 2-6). Because neither reference discloses the above-quoted feature of claim 1, neither reference could possibly suggest that the "controlling action [includes] monitoring and controlling a configuration of radio network elements and/or radio network resources" (claim 6, lines 2-3). Therefore, Appellant respectfully submits that the rejection of claim 6 be withdrawn and this claim be allowed for at least the reasons stated above.*

However, Examiner respectfully disagrees with the Appellant's assertion. Park in view of 3GPP TS 32.600 do indeed teach the cited limitations. Specifically, Park teaches controller for controlling a configuration of radio network elements and/or radio network resources (a controller, is the element that executes the method of Figure 6B element S2-6) to execute the controlling action based on the retrieved data; section 0062, the TMN network management center 100 manages the pertinent control station 300 and the pertinent base station 400 by means of the TMN method i.e. execute controlling action, upon receiving the state information concerning the sub blocks 302 within the pertinent control station 300 or the sub blocks 402 within the pertinent base

station 400 from the local TMN repeater 301 within the pertinent control station 300 (S2-6)). Park does not explicitly teach a monitor for monitoring configuration of radio network elements and/or radio network resources. 3GPP TS 32.600 in the same field of endeavor teaches the system monitoring service component (a monitor) provides the operator with the ability to receive reports (on request or spontaneously) on the configuration of the entire network or parts of it from managed NEs. These consist of structure, states, versions employed and data settings. The NE sends spontaneous reports if there was an autonomous change of, for example, the states or other values due to Fault Management (FM) actions (page 13 section 5.2).

Furthermore, Examiner has clearly shown that claim 1 is not allowable for the reasons cited above; as such Honorable Board, it is believed that rejection to claim 6 should be sustained.

Claim 16:

Appellant argues (page 32 paragraph 2) that *neither reference, whether considered individually or in combination, could remotely suggest "a monitor configured to monitor configuration of radio network elements and/or radio network resources; and a controller configured to control configuration of radio network elements and/or radio network resources", as recited in claim 16. Therefore, Appellant respectfully submits that the rejection of claim 16 be withdrawn and this claim be allowed for reasons similar to those discussed above with respect to claim 6.*

However, Examiner respectfully disagrees with the Appellant's assertion. Park in view of 3GPP TS 32.600 do indeed teach the cited limitations. Specifically, Park

teaches controller for controlling a configuration of radio network elements and/or radio network resources (a controller, is the element that executes the method of Figure 6B element S2-6) to execute the controlling action based on the retrieved data; section 0062, the TMN network management center 100 manages the pertinent control station 300 and the pertinent base station 400 by means of the TMN method i.e. execute controlling action, upon receiving the state information concerning the sub blocks 302 within the pertinent control station 300 or the sub blocks 402 within the pertinent base station 400 from the local TMN repeater 301 within the pertinent control station 300 (S2-6)). Park does not explicitly teach a monitor for monitoring configuration of radio network elements and/or radio network resources. 3GPP TS 32.600 in the same field of endeavor teaches the system monitoring service component (a monitor) provides the operator with the ability to receive reports (on request or spontaneously) on the configuration of the entire network or parts of it from managed NEs. These consist of structure, states, versions employed and data settings. The NE sends spontaneous reports if there was an autonomous change of, for example, the states or other values due to Fault Management (FM) actions (page 13 section 5.2).

Furthermore, Examiner has clearly shown that claim 10 is not allowable for the reasons cited above; as such Honorable Board, it is believed that rejection to claim 16 should be sustained.

Claim 8:

Appellant argues (page 32 paragraph 3) that *neither reference, whether considered alone or in combination, suggests the features of claim 8, as both*

references, which were cited in the Office Action, are silent as to "the radio network on the subordinate level". Because both reference does not disclose, either expressly and implicitly, any type of "radio network on the subordinate level", it would be impossible for either reference to disclose, either expressly or implicitly, that "the data demanded...comprise topology data of the radio network on the subordinate level" (claim 8, lines 1-3).

However, Examiner respectfully disagrees with the Appellant's assertion. Park in view of 3GPP TS 32.600 do indeed teach the cited limitations. Specifically, Park does not explicitly teach the data demanded depending on the controlling action comprise topology data of the radio network on the subordinate level. 3GPP TS 32.600 in the same field of endeavor teaches The system monitoring service component provides the operator with the ability to receive reports (on request or spontaneously) on the configuration of the entire network (topology) or parts of it from managed NEs. These consist of structure, states, versions employed and data settings (page 13 section 5.2).

Furthermore, Examiner has clearly shown that claim 1 is not allowable for the reasons cited above; as such Honorable Board, it is believed that rejection to claim 8 should be sustained.

For the above reasons, Honorable Board, it is believed that the rejections should be sustained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Therefore, for the above reasons, Honorable Board, it is believed that the rejections should be sustained.

Respectfully submitted,

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